REMARKS

The Examiner is thanked for the thorough examination of this application and the indication that all claims patently define over the prior art. In this regard, the Office Action has advanced rejections based ONLY on 35 U.S.C. §112, first paragraph, and a provisional, obviousness-type double patenting rejection. For at least the reasons herein, Applicant respectfully requests reconsideration and withdrawal of these rejections.

Teachings of the Specification

According to the specification, the A_P and B_P are initially defined in equation (11) to satisfy w[n]=C·x[n]:

$$w[n] = A_p y[n] + B_p y^*[n] \qquad (11)$$

As further shown in the spec, the goal of the calibration method in the invention is the identification of the coefficients A_p and B_p whether satisfying equation (13):

$$A_p \cdot B + B_p \cdot A^* = 0 \qquad (13)$$

where A and B are defined in equation (10)

$$A = \frac{1}{2}\left\{(1+\alpha)e^{-j\theta/2} + (1-\alpha)e^{j\theta/2}\right\}$$
$$B = \frac{1}{2}\left\{(1+\alpha)e^{j\theta/2} - (1-\alpha)e^{-j\theta/2}\right\} \qquad (10)$$

The initial values of parameters A_P and B_P can be any nonzero values. And an update in step 36 in Fig. 3 will recursively converge the parameters A_P and B_P to approximate equation (11):

$$A_p' = A_p - \mu \cdot B_p^* \cdot U_1 \cdot U_2 \text{ and}$$

$$B_p' = B_p - \mu \cdot A_p^* \cdot U_1 \cdot U_2$$

where A_p' and B_p' are the updated values, A_p and B_p are the current values, and μ is a preset step size parameter. As well known in the art, A_p and B_P will converge toward, and becomes close enough to, their target values if the iteration number is large enough.

In the present application, if the coefficients A_p and B_p are iteratively updated more than H times, the procedure is terminated; otherwise, the procedure goes to step 31 for another iteration. Therefore, the initial values of A_p and B_P can be any nonzero numbers. Independent claims 1 and 6 have been amended to specify this limitation, and as amended the claims satisfy all statutory requirements, including the requirements of 35 U.S.C. §112. Support can be found at least in equations (7) to (13), and therefore the amendment adds no new matter to this application.

Provisional Double patenting

Applicant acknowledges the provisional, nonstatutory obviousness-type double patenting rejection. As the claims have not yet been substantively allowed, and as no claims in the companion application have yet been allowed, it is believe that requiring a terminal disclaimer and government fee at this juncture is premature. However, Applicant intends to file a terminal disclaimer upon receiving a substantive allowance of the claims in this application.

Cited Art

The cited art made of record, but not relied upon, is not believed to impact the patentability of the presently pending claims.

Conclusion

For the reasons as described above, all claims 1-10 are believed to be in condition for allowance (subject to the filing of a terminal disclaimer)

Should Examiner feel that further discussion of the application and the Amendment is conducive to prosecution and allowance thereof, please do not hesitate to contact the undersigned at the address and telephone listed below.

No fee is believed to be due in connection with this amendment and response. If, however, any fee is deemed to be payable, you are hereby authorized to charge any such fee to Deposit Account No. 20-0778.

Respectfully submitted,

By: _____

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